

In the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

1 (currently amended). A method for producing a micro-particle dry powder comprising a viral particle, comprising the steps, step of:

spray-drying a mixture of the viral particle and a stabilizing carbohydrate using an outlet temperature of no more than 60°C,

wherein the stabilizing carbohydrate is trehalose.

2 (cancelled).

3 (previously presented). The method according to claim 1, wherein the concentration of the carbohydrate is from 2% w/v to 70% w/v.

4 (previously presented). The method according to claim 1, wherein the concentration of the carbohydrate is from 30% w/v to 60% w/v.

5 (previously presented). The method according to claim 1, wherein the concentration of the carbohydrate is from 40% w/v to 55% w/v.

6 (previously presented). The method according to claim 1, wherein the concentration of the carbohydrate is from 6% w/v to 12% w/v.

7 (previously presented). The method according to claim 1, wherein the spray dryer has an outlet temperature from 20 to 40°C.

8 (previously presented). The method according to claim 1, wherein the feed rate of the spray dryer is from 0.05 to 2 g/min.

9 (previously presented). The method according to claim 1, wherein the spray dryer nozzle-tip configuration is 1 bar 10L/sec to 3 bar 30L/sec.

10 (previously presented). The method according to claim 1, wherein the spray dryer nozzle-tip configuration is 1.5 bar 14L/sec.

11 (previously presented). The method according to claim 1, wherein the spray dryer nozzle-tip configuration is 3 bar 22L/sec.

12 (previously presented). The method according to claim 1, wherein the drying air pressure is from 1.5 bar to 3 bar.

13 (previously presented). The method according to claim 1, wherein the drying air flow rate is from 4.8L/sec to 8L/sec.

14 (previously presented). The method according to claim 1, wherein the atomization air flow rate is from 0.10 to 0.6L/sec.

15 (previously presented). The method according to claim 1, wherein the virus is an envelope virus.

16 (previously presented). The method according to claim 1, wherein the virus is measles.

17 (withdrawn). A virus-containing micro-particle dry powder obtainable by a method comprising the steps of:

spray-drying a mixture of the viral particle and a stabilizing carbohydrate using an outlet temperature of no more than 60°C.

18 (withdrawn). The virus-containing micro-particle dry powder according to claim 17, wherein each micro-particle is suitable for deep lung deposition.

19 (withdrawn). The virus-containing micro-particle dry powder according to claim 17, wherein each micro-particle is suitable for bronchiolar and upper pulmonary tract deposition.

20 (withdrawn). The virus-containing micro-particle dry powder according to claim 17, wherein the powder is suspended in a non-aqueous medium.

21 (withdrawn). The virus-containing micro-particle dry powder according to claim 20, wherein the non-aqueous medium is a perfluorocarbon.

22 (withdrawn). The virus-containing micro-particle dry powder according to claim 20, wherein the non-aqueous medium is an oil, selected from the group consisting of:
sesame oil, arachis oil, soya oil, mineral oil and ethyloate.

23 (withdrawn). The virus-containing micro-particle dry powder according to claim 20, wherein the non-aqueous medium is selected from the group consisting of:
glycerol, ethylene glycol, propylene glycol, propylene oxide and polypropylene glycol.

24 (withdrawn). A vaccine comprising a virus-containing micro-particle dry powder wherein said powder is obtainable by a method comprising the steps of:
spray-drying a mixture of the viral particle and a stabilizing carbohydrate using an outlet temperature of no more than 60°C for use in a method of therapy.

25 (withdrawn). A method for the treatment or prevention of a viral infection, wherein said method comprises administering, to a patient in need of such treatment, a virus-containing micro-particle dry powder obtainable by a method comprising the steps of:

spray-drying a mixture of the viral particle and a stabilizing carbohydrate using an outlet temperature of no more than 60°C.

26 (withdrawn). The method according to claim 25, wherein the infection is measles.

27 (withdrawn). The method according to claim 26, wherein the powder is processed in the form of a tablet or capsule.

28 (withdrawn). A sachet comprising a virus-containing micro-particle dry powder obtainable by a method comprising a viral particle, comprising the steps of:

spray-drying a mixture of the viral particle and a stabilizing carbohydrate using an outlet temperature of no more than 60°C.